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AWARD NUMBER: W81XWH-09-C-0101

TITLE: Implement Family Member Assessment Component in the
Millennium Cohort Study

PRINCIPAL INVESTIGATORS:

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Durham, NC 27703

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Fort Detrick, Maryland 21702-5012

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14. ABSTRACT This project focuses on examination of the impact of service member deployment to a war zone on the service member's family, and is being conducted in collaboration with the Millennium Cohort Study (MilCo) team. As part of MilCo Panel 4, which will enroll about 62,000 new participants in 2011, a probability sample of married MilCo enrollees will be asked for contact information for their spouse, who will then be contacted and invited to participate in the MilCo Family Cohort (FamCo). Spouses who consent will complete a ~45-minute, internet-based assessment focused on spouse's perception of: deployment stressors; health and mental health status of family members; and quality of family interpersonal relationships. During FamCo Year 1: the FamCo team worked with the MilCo team to develop the FamCo study design, spouse assessment, and data analysis and report plans; the MilCo team received IRB approval of the FamCo assessment and data collection protocol; and the MilCo team submitted an OMB Supporting Statement, which as of 29 October 2010 has not yet been approved.					
15. SUBJECT TERMS military families; military spouses; impact of war zone deployment					
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Table of Contents

	<u>Page</u>
Introduction.....	4
Body.....	4
Key Research Accomplishments.....	6
Reportable Outcomes.....	7
Conclusion.....	7
References.....	7
Appendices.....	7

Introduction

The Family Cohort (FamCo) project's primary objective is to examine empirically the impact of deployment to OEF/OIF on the families of US service members. The study is being conducted in collaboration with the Millennium Cohort Study (MilCo), and will be implemented by adding a family member assessment component to MilCo's Panel 4. Panel 4 will be launched in 2010, and will enroll about 62,000 new participants in MilCo. FamCo will select a probability sample of Panel 4 participants who report in their MilCo baseline assessment that they are married, and ask them to provide contact information—including e-mail address—for their spouse. The FamCo sample will be selected to produce about 10,000 spouse participants, of which about half will be married to a service member who has been deployed to OEF/OIF at least once, and the other half will be married to a service member who has not (yet) been deployed to either of those conflicts. The baseline assessment for FamCo focuses on spouses' perceptions of: deployment stressors for family members; health and mental health status of family members; and quality of family interpersonal relationships. Additional relevant information (e.g., health and mental health service utilization) will be drawn from military records.

Body

The FamCo project was purposefully implemented as a collaborative effort of the FamCo team and the MilCo team, with separate funding streams. All of the tasks necessary to implement the study are being conducted collaboratively, but leadership varies across the tasks. Tasks that involve the logistics of the survey (e.g., sample selection, survey implementation, survey data management) are led by the MilCo team with input and support from FamCo, and tasks that include the substance of and constructs covered by the survey, and the analysis and interpretation of FamCo data, are led by the FamCo team, with input and support from MilCo. Additionally, the MilCo team added a new member (Dr. Hope McMaster) to their staff who coordinates and manages FamCo efforts by the MilCo team. Communication between the teams has been facilitated by a weekly conference call, in which we discuss progress and issues from the current work and plans for upcoming tasks.

The FamCo project's Scope of Work for the first year of this 4-year effort, as described in the FamCo application, was focused on preparing for the launch of FamCo in MilCo's Panel 4 (e.g., finalizing baseline spouse assessment, obtaining IRB and OMB approvals, conducting pilot study of feasibility). The teams started the joint efforts by creating a draft of the spouse assessment. In doing so, we purposefully focused on consistency of measures with those being used in the MilCo service member assessment (e.g., for health and mental health constructs assessed in both studies, we opted for the measure that is included in the MilCo baseline assessment unless there was a compelling reason not to do so).

As is typically the case, our first draft of the assessment included measures of many constructs, and was quite long. Mindful of participant burden and of findings from the survey literature documenting that for paper-and-pencil surveys and internet surveys, about 45 minutes of administration time is the limit—surveys longer than that produce significantly lower participation

rates and lower data quality among those who do participate. Therefore, we discussed construct priorities and used them to reduce survey length. Because the FamCo study is intended to be longitudinal, we also discussed the use of a planned missingness design, in which about two-thirds of the assessment time (i.e., ~30 minutes) of assessment time would be devoted to constructs that would be included in every wave FamCo assessment, with primary health and mental health outcomes and relationship quality measures having top priority. Because at present little is known about moderators and mediators of the relationships between warzone deployment and FamCo's primary outcomes, the other 15 minutes could rotate inclusion of hypothesized moderators and mediators over time. Because the FamCo samples are large, use of this strategy will produce a larger informational return on investment than would a static assessment plan (all measures repeated in each wave of assessment).

When the collaborators agreed on the assessment, the MilCo team submitted the proposed FamCo baseline assessment for review and approval by the NHRC IRB and by OMB. The submitted assessment included questions for the spouse about health and mental health symptoms experienced by each child (under age 18) who lived in with the service member and spouse. We chose parent report of child symptoms because of the substantial logistical problems associated with associated with assessing children directly (e.g., establishing informed consent, the need for different questions for developmental subgroups). The NHRC IRB ruled that if the children are identifiable, they must be considered study subjects and be fully consented. This unusual interpretation of the regulations required the team to change substantially the FamCo assessment of children, but with these and other requested changes the NHRC IRB approved the protocol.

The OMB review process, however, continues. Because OMB clearance is a two-stage process, the pace of review can vary substantially from protocol to protocol (i.e., each Federal agency has an OMB Clearance Desk Officer who is responsible for overseeing the internal review of all submissions by the agency of Supporting Statements to OMB for clearance, and the within-agency review process is typically much more time-consuming than OMB's review of the agency-approved product). At the end of the FamCo study's first year, and still one month later, OMB has not reviewed the FamCo submission.

As the months in Year 1 went by without an OMB ruling, the FamCo team decided to delay any aspects of our SOW that could be influenced substantially by OMB's ultimate ruling. Our reasoning for doing so included that [a] we did not want to waste time and other resources developing materials (e.g., protocols, data analysis plans) that don't fit with what OMB approves, and [b] we don't want to have already spent resources that will be needed to respond to what OMB approves. Therefore our actual level of effort for much of Year 1 was substantially less than anticipated, so we have substantial resources to carry over into Year 2, when we now expect to do much of what we had planned to do in Year 1.

In addition to the FamCo team's change in plans, the MilCo team also made important changes in plans. First, due to findings from MilCo's Panels 1-3 and the significant difference in mode costs, the MilCo team decided to drop the mailed pencil-and-paper response mode for Panel 4, including FamCo. Second, MilCo's planned Panel 4 pilot study has been re-conceptualized from

pilot study to “run-in.” In the run-in approach, common in community-based clinical trials, information based on the experiences of the initial set of participants enrolled (e.g., 10% or less of intended enrollment) is evaluated to determine if procedures are working as intended. If so, the effort is continued as planned. If not, appropriate changes are made to the protocol to remediate identified problems and the study is continued, and if the change(s) are substantial, participants in the run-in phase are deleted from the study files.

Although we did cut back our effort, particularly as the months passed without clearance, the FamCo team did continue work unlikely to be heavily effected by OMB’s decision. We supported MilCo in the development of the FamCo website (on which the participants will respond). We also participated in the selection of a FamCo Scientific Review Panel, the planning of agenda for the Panel’s first meeting, and we participated in the meeting. We also began identification of specific manuscripts that will be produced from the survey findings, and a plan for examining FamCo non-response and correcting any resulting bias using propensity analysis.

Additionally, over the first year we took advantage of opportunities to make presentations about FamCo. We made these presentations for at least two reasons: [1] to inform the field about our plans for the study and the kinds of information that it will produce, and [2] to inform diverse groups of peers in the field of our thinking about the design and implementation plans for the study, and engage them in dialog that might enhance our thinking about various aspects of the study. Across the year we made presentations at the following meetings/conferences (slides for these presentations are included in the appendix):

- *The Brain at War*, New York, NY, 2-19-2010
- *MOMRP Family Research Review*, Frederick, MD, 7-21-2010
- *Force Health Protection*, Phoenix, AZ, 8-2010
- *Congressional Black Caucus*, Washington, DC, 9-14-2010
- *FamCo Scientific Review Panel Meeting*, San Diego, CA, 9-21-2010

Key Research Accomplishments

- Created Spouse Assessment Protocol for the FamCo Spouse Assessment
- Received approval for FamCo Spouse Assessment Survey as a component of MilCo
- Sharpened the FamCo design in response to MilCo changes
- Made presentations on FamCo at five professional meetings

Reportable Outcomes

N/A

Conclusion

N/A

References

N/A

Appendices

- *The Brain at War*, New York, NY, 2-19-2010
- *MOMRP Family Research Review*, Frederick, MD, 7-21-2010
- *Force Health Protection*, Phoenix, AZ, 8-2010
- *Congressional Black Caucus*, Washington, DC, 9-14-2010
- *FamCo Scientific Review Panel Meeting*, San Diego, CA, 9-21-2010

APPENDICES

The Brain at War

New York, NY, 2-19-2010



Millennium Cohort Family Study

John Fairbank, PhD, Duke University
Charles Marmar, MD, New York University
William Schlenger, PhD, Abt Associates Inc.
Tyler Smith, MS, PhD, Naval Health Research Center



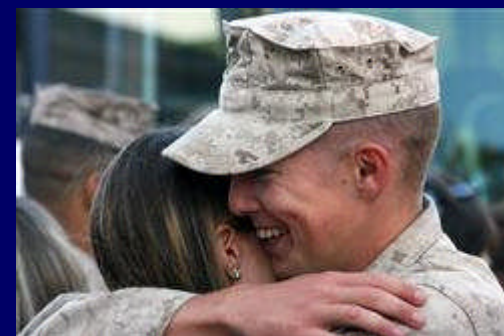
Background



- Few epidemiologic studies have examined the impact of deployment on family members and family functioning
- Family relationships can be a source of support or stress for service members
- The Millennium Cohort Study has enrolled more than 151,000 members since 2001. Members are surveyed every 3 years to understand the health effects of military service
- A family cohort will be added to the 2010 Millennium Cohort enrollment cycle to assess the interrelated health effects of military service and deployment on service members, spouses, and co-resident children
- Family survey will include topics such as impact of deployment and military service on spouse and family, services received, family cohesion, and behavior and development of children.

Objectives

- Answer important health related questions about military service members and their families in the context of military deployment and other occupational exposures
- Assess the association of family support and other factors with health outcomes



Family Study Enrollment Design



62,500 estimated to enroll in the
Millennium Cohort Study 2010 enrollment



~50% married (by design)
(n ~ 31,250)



65% estimated to give
permission to contact spouse
(n ~ 20,312)



50% estimated to respond
resulting in ~10,156 spouses
enrolling in the Family Cohort Study

Methodology



- **1% sample pilot testing**
- **Married service members will be asked to grant permission to contact spouse**
- **Target: Enroll ~10,000 spouses**
 - **Estimated half of spouses' service member will have been deployed to OIF/OEF at least once**
- **Link to other military data to complement subjective measures with objective measures of exposures and health outcomes**

Methodology



- Questionnaire includes widely used screening instruments (PHQ, PCL, SF-36V, CAGE, FACES IV, ISI, others)
- Includes measures of physical health, behavioral health, mental health, and family functioning
- Includes important exposure questions and other metrics (CAM use, sleep, etc.)
- Participants can respond via secure website: www.familycohort.org



Partnering Organizations and Co-Principal Investigators



- DoD funding via Military Operational Medicine Research Program (MOMRP), administered by USAMRMC
- Cooperative Research and Development Agreement (CRADA) between NHRC and Abt Associates, Inc.
- Co-Principal Investigators:
 - John Fairbank, PhD, Duke University
 - Charles Marmar, MD, New York University
 - William Schlenger, Abt Associates and Duke University
 - Tyler Smith, MS, PhD, Naval Health Research Center

Important Partners



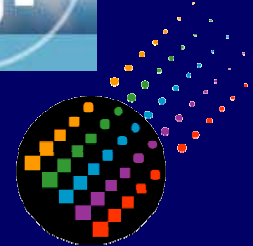
- Defense Manpower Data Center



- Henry M. Jackson Foundation



- Anderson Direct Mailing Company



- Others



Measured Health Outcomes and Impact



Main Survey Topics

- Demographic information
- General health (including sleep)
- Spouse, family, child, and service member stress
- Impact of deployment and military service
- Family cohesion, expressiveness, and conflict
- Child behavioral, developmental, and general health
- Health service use
- Alcohol and tobacco use
- Military specific questions for active-duty spouses

Research will facilitate identification of specific interventions:

- Deployment-related stress
- Family member resilience
- Family support dynamics
- Service member and family well-being
- Force readiness

Future Direction



- **In 2010, the Millennium Cohort Family Study is projected to launch and enroll spouses of military service members**
- **By 2012, data collected from the Millennium Cohort Family Study would provide strategic information for DoD leadership**
- **Securing funding for this longitudinal study is essential to better understand the long-term effects of military service on military member and family health**

Acknowledgments

Millennium Cohort Study Co-Investigators

COL Paul J. Amoroso, MC, USA, Dept of Clinical Investigation, Madigan Army Medical Center, Tacoma, WA
Edward J. Boyko, MD, MPH, VA Epidemiology Research Information Center, Univ Washington, Seattle, WA
Gary D. Gackstetter, DVM, MPH, PhD, Analytic Services, Inc., Washington DC
Tomoko I. Hooper, MD, MPH, Uniformed Services University of the Health Sciences, Bethesda MD
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Col Timothy S. Wells, USAF, BSC, Air Force Research Laboratory, Wright-Patterson Air Force Base, OH

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Additional Collaborators and Supporters

Scott Seggerman, Management Information Division, DMDC; Dr. Carl Castro, Dr. Dennis Goodes, Mr. Mark Bither, MAJ Pedro Bonilla-Vazquez, Dr. Joan Hall, and Dr. Kate Nassauer, MOMRP; Dr. Karl Friedl and Dr. Richard Satava, MRMC; Dr. Charles Hoge, WRAIR; Dr. Susan Proctor and Dr. Kristin Heaton, USARIEM; COL Charles Engel, WRAMC; Dr. William Schlenger, Abt Associates; Dr. John Fairbank, Duke University; Dr. Charles Marmar, UCSF; Dr. Seth Eisen, VA; Dr. Roger Gibson, USUHS; Dr. Deborah Wingard, Dr. Donna Kritz-Silverstein, and Dr. Thomas Patterson, UCSD; Dr. Caroline Macera, Dr. James Sallis, and Dr. Donald Sylmen, SDSU; Dr. Pam Keel, Univ of Iowa; Dr. Gaston Bathalon, USARIEM; Dr. Alyson Littman, Seattle ERIC; Anna Bukowinski, Sydney Lee and Carter Sevick, DoD BIHR; Dr. Chris Phillips, RAP; Dr. Robin Harris, Dr. Eyal Shahar, Dr. Grant Skrepnek, and Dr. Stephen Coons, Univ of Arizona; Dr. Sarah Fortuna, AFRL; CAPT Robert Koffman, BUMED; and professionals from the Institute for Systems Biology

We are indebted to the Millennium Cohort Study members for their continued participation!

MOMRP Family Research Review

Frederick, MD, 7-21-2010

MOMRP

Science to Soldier

Millennium Cohort Family Study

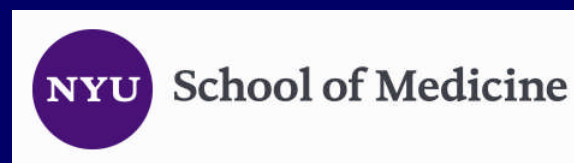
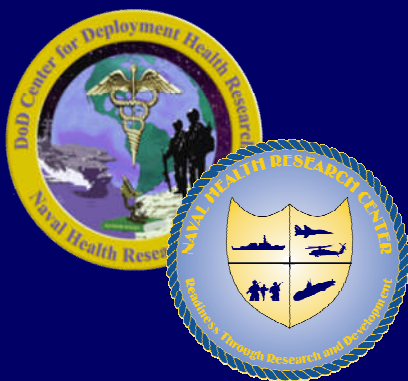
PI: William Schlenger, PhD, Abt Associates and Duke University

Co-PI: John Fairbank, PhD, Duke University

Co-PI: Charles Marmar, MD, New York University

Co-PI: Tyler Smith, MS, PhD, Naval Health Research Center

Co-I: Hope McMaster, PhD, Naval Health Research Center



Administrative Information



Millennium Cohort
Family Study

- Award Number: W81XWH-09-C-0101
- Award Date: 28 Sep 2009
- Award Amount: \$9,850,873
- COR: MAJ Pedro Bonilla-Vazquez
- Project Officer: Ms. Buffy Burdette
- Portfolio Mgrs: COL Carl Castro, PhD, & Kate Nassauer, PhD.

Study Background and Rationale



Millennium Cohort
Family Study

- **Substantial empirical documentation of mental health and related outcomes for US service members deployed to war-zones**
- **Less is known about deployment-related outcomes for spouses and other family members of US service personnel**
- **War-zone deployment can be understood as representing an extreme case of work-family conflict resulting in degraded individual and family functioning:**
 - * **extended geographic separation**
 - * **constant threat of bodily harm**
 - * **anxiety and mood changes**
 - * **substance abuse and related problems**
 - * **service member concern over events at home**

Study Background and Rationale



Millennium Cohort
Family Study

- **DoD's Mental Health Task Force recommendations:**
 - Research on the processes of post-deployment adjustment for family members
 - Research on children who have been separated from their parents by deployment, including their access to support for psychological health issues
- **A recent gap analysis by the Military Operational Medicine Research Program (MOMRP) identified studies of military families as a high priority issue**

OEF/OIF Family Impact Study: *Leveraging Existing Efforts*



Millennium Cohort
Family Study

- So, we are conducting a community epidemiologic study of the impact of OEF/OIF deployment on family members

- For practical reasons, the study is:
 - being implemented in the context of the **Millennium Cohort Study**
 - focused primarily on spouses and secondarily on co-resident children
 - funded only for the baseline assessment, but designed and intended to be longitudinal

What is the Millennium Cohort Study?



- The **Millennium Cohort Study** was launched in 2001 in collaboration with all US military services and the Department of Veterans Affairs, prior to the conflicts in Iraq and Afghanistan
 - The **Millennium Cohort Study** has now enrolled more than 151,000 service members that are surveyed every 3 years to examine how deployment and other military occupational exposures affect the long-term physical and mental health of military members and veterans
 - 50% deployed in support of OIF/OEF
 - 50% Reserve Guard
 - 25% separated from the military
-
- ✓ Panel 1: 77,000
 - ✓ Panel 2: 31,100
 - ✓ Panel 3: 43,000

Family Study Design Overview



- Family member assessment added to new enrollees in the **Millennium Cohort Study**, which will be launched in 2010 and enroll about 62,000 new service member participants
- Enroll ~ 10,000 spouses, about half of whom are spouses of service members who have been deployed to OEF/OIF at least once
- Primary Aim 1: To assess the impact of OIF/OEF deployment on:
 - mental health and related outcomes of spouses and co-resident children of service member
 - the quality of the relationships between service members, spouses and their children
 - the associations between family member outcomes and service member outcomes
- Primary Aim 2: To identify vulnerability and resilience factors for deployment stress-related outcomes for spouses and children of deployed service members

Family Study Design Overview (continued)



Specific outcomes assessed include:

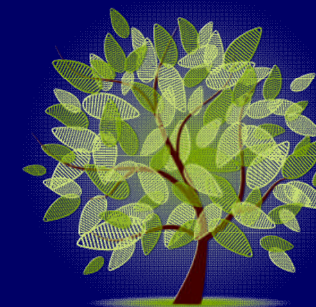
- **Spouse's report of deployment-related stressors**
- **Spouse's mental health symptoms (including substance abuse) and mental health service use**
- **Spouse's health status and health service use**
- **Spouse's sleep and sleep quality**
- **Spouse's report of the service member's health and mental health status and service use**
- **Family relationships**
- **Child health and mental health symptoms and service use**

Methodology

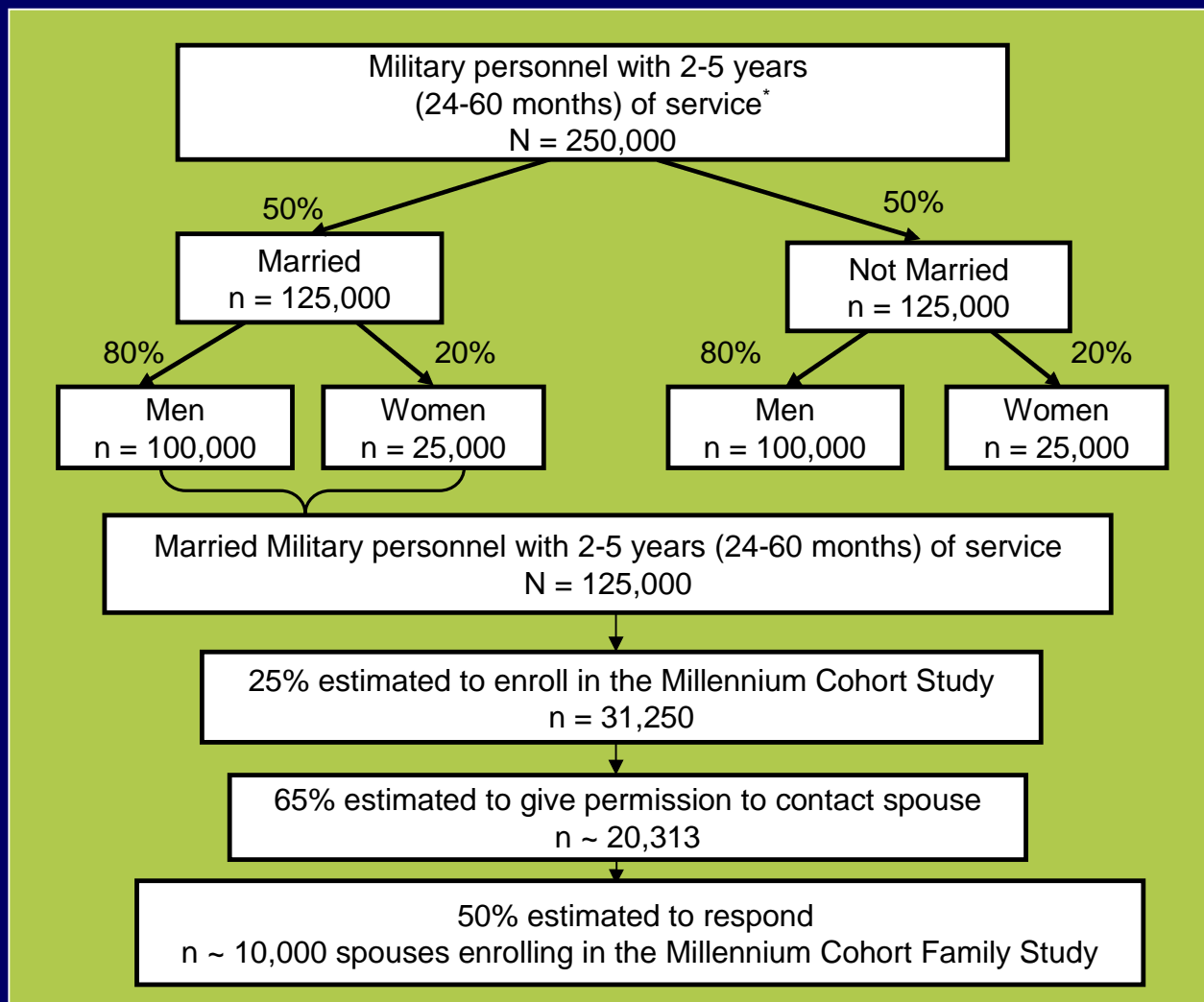
- Panel 4 of the **Millennium Cohort Study** includes a probability sample of military service members, oversampling for female and married service members
- Married service members will be asked to grant permission to contact their spouse
- Participants respond via secure website: www.familycohort.org
- Link to other military data to complement self-report measures with objective measures of exposure, service use, and health-related outcomes

The screenshot shows a survey section titled "RELATIONSHIP WITH YOUR SPOUSE". On the left is a sidebar menu with various topics: Background Information, Education & Employment, Physical Health, Well-Being, Seeking Care, Relationship with Your Spouse, Your Spouse's Deployment, Your Spouse's Behavior, Military Life, Life Experiences, Your Alcohol Use, Your Tobacco Use, Your Sleep Quality, Your Family, Your Military Service, and Open Response. The main content area contains the following questions:
1. "Including your current relationship, how many times have YOU been married? For example, if you have been married one time only, please mark 1 for your response." with a text input field for "# of times married".
2. "How many years have you been married to your SPOUSE?" with radio button options: Not married, less than 2 years, 2-5 years, 6-10 years, 11-15 years, and 15 or more years.
3. "How long have you and your spouse been in a committed relationship?" with radio button options: Not in a committed relationship, less than 2 years, 2-5 years, 6-10 years, 11-15 years, and 15 or more years.

Family Study Sample Design



Millennium Cohort
Family Study

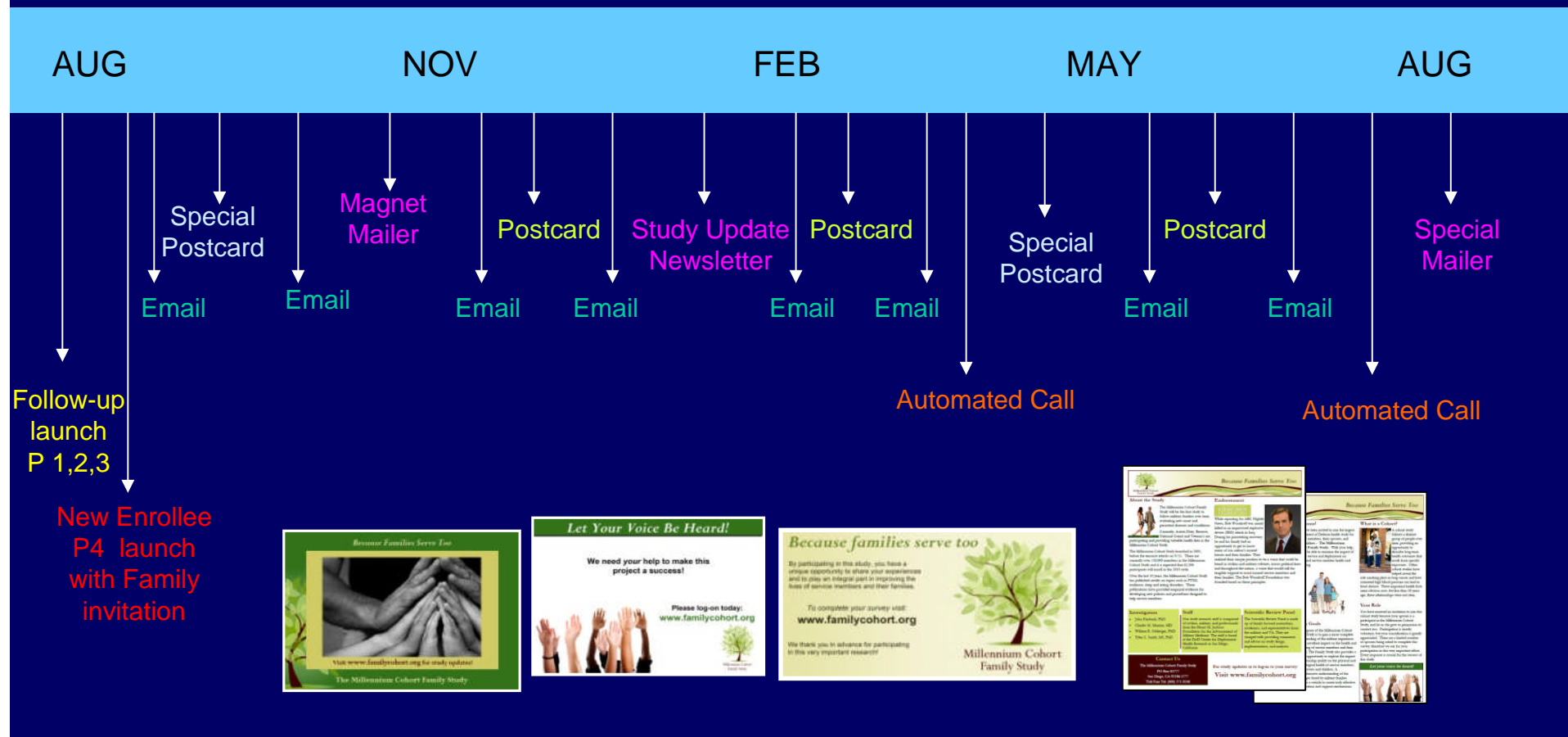


***Active-duty, Reserve, and National Guard, oversampling for female and married personnel**

2010/2011 Survey Cycle Timeline

August 2010

August 2011



Measured Health Outcomes and Impact

Main Survey Topics:

- Demographic information
- General health (including sleep)
- Spouse, family, child, and service member stress
- Impact of deployment and military service
- Family cohesion, expressiveness, and conflict
- Child behavioral, developmental and general health
- Health services
- Alcohol and tobacco use
- Military specific questions for active-duty spouses

Research will inform policy makers and guide intervention and prevention strategies related to:

- Family member resilience
- Deployment-related stress
- Family support dynamics
- Service member and family well-being
- Force readiness
- Military separation
- Barriers to care

Selected Family Study Hypotheses



- **Military families will demonstrate resilience during deployment and other periods of significant stress**
- **Increased stress on the family system as a result of deployment to a war-zone is associated with greater levels of psychological distress**
- **Spouses of deployed service members will report higher levels of psychological distress than spouses of non-deployed**
- **Level of spousal distress will be associated with number of deployments to war zones, duration of the deployments, and the level of warfighters' exposure to combat and other war zone stressors**
- **Children of deployed services members will have higher levels of internalizing and externalizing behavioral problems, in a dose-response relationship**

Preliminary Deliverable and Dissemination Plan



- **All years:**
 - Quarterly and Annual Reports, IPRs, comprehensive final report
- **Years 1/2:**
 - Standard methodological studies, e.g.:
 - * nonresponse analyses
 - * comparability at baseline of deployed vs non-deployed groups
 - * internal consistency reliability and dimensionality of multi-item scales.
- **Years 2/3:**
 - “Main findings” manuscripts, e.g.:
 - * spouse stressors, health, mental health, and functioning (deployed vs non-deployed, service member vs spouse);
 - * relationship quality;
 - * health, mental health, and functioning of children (spouse report of Sx, record based Dx and service use information).
- **Years 4/5:**
 - Conceptually-driven manuscripts, e.g.:
 - * mediators and moderators of relationships of exposures and outcomes
 - * SEM models of hypothesized causal factors

Study Progress to Date



- **NHRC IRB approved study protocol**
- **Family questionnaire developed and submitted to OMB for review and approval**
- **Family study secure website developed and tested**
- **Web-based questionnaire developed and being tested**
- **Scientific Review Panel recruited and initial meeting scheduled for September 21, 2010**
- **Study aims and design presented and critically discussed at multiple professional meetings**
- **Study analysis and dissemination plans under development**

Force Health Protection

Phoenix, AZ, 8-2010



Voice of the Military Family: Using Survey Methodology to Understand the Impact of Military Service on Family Health and Well-Being

Hope M. McMaster, PhD¹; Kari E. Sausedo, MA¹; Cynthia A. LeardMann, MPH¹; Isabel G. Jacobson, MPH¹; Nisara S. Granado, MPH, PhD¹; Besa Smith, MPH, PhD¹; Beverly D. Sheppard, BS¹; John A. Fairbank, PhD²; Charles Marmar, MD³; William E. Schlenger, PhD⁴; and Tyler C. Smith, MS, PhD¹; for the Millennium Cohort Study Team

¹DoD Center for Deployment Health Research, Naval Health Research Center; ²Duke University Medical Center; ³New York University Langone Medical Center; ⁴Abt Associates Inc.



Abstract

The Millennium Cohort Family Study will be the largest prospective study in military history designed to assess the interrelated health effects of military service and deployment on service members, spouses, and their children. The study team anticipates enrolling 10,000 spouses, of whom approximately half will be married to service members who have deployed in support of the operations in Iraq and Afghanistan. Participants will complete a web-based questionnaire covering mental/physical health, relationship quality, deployment/reunion, and service utilization. In addition, data will be linked to medical records collected and maintained by the DoD and Department of Veterans Affairs that include inpatient/outpatient care, pharmacology, and other data. The Millennium Cohort Family Study offers a unique opportunity to explore the interdependence of spouses' experiences and their impact on family health and well-being. A comprehensive understanding of the challenges faced by military families provides a vehicle to create truly effective interventions and support mechanisms.

Background



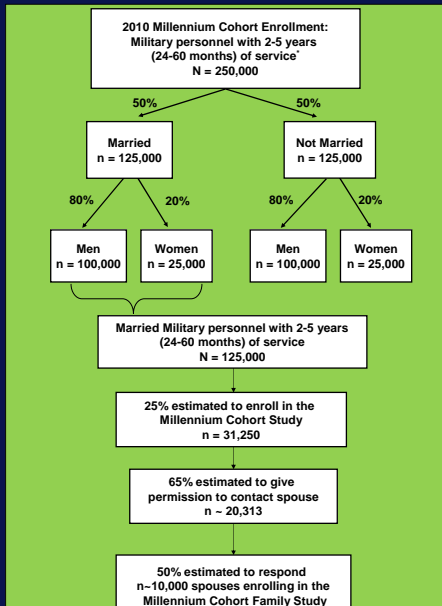
- The **Millennium Cohort Study** was launched in 2001 in collaboration with all US military services and the Department of Veterans Affairs, prior to the conflicts in Iraq and Afghanistan.
- The **Millennium Cohort Study** has now enrolled over 151,000 service members that are surveyed every 3 years to examine how deployment and military occupational exposures affect the long-term health of military members and veterans.
- A **Family Cohort** has been added to the 2010 **Millennium Cohort** enrollment cycle to assess the interrelated health effects of military service and deployment on service members, spouses, and co-resident children.
- Individuals included in the **Millennium Cohort Family Study** are the spouses of participants in the 2010 enrollment panel of the **Millennium Cohort Study** that agree to enroll in the **Family Study** after their sponsor gives permission to contact them.

Objectives

- To gain a more complete understanding of the military experience and to explore its impact on the health and well-being of service members and their families.
- Investigate the impact of relationship quality on the physical and psychological health of service members, their spouses and children.
- Assess the importance of family support and other factors on physical and mental health outcomes.
- Examine the adjusted probabilities of new-onset diseases and conditions among military spouses and children.
- Share the "voice of the military family" with decision and policy makers to help create well designed interventions and support mechanisms.

Summary of Participants

Enrollment Design

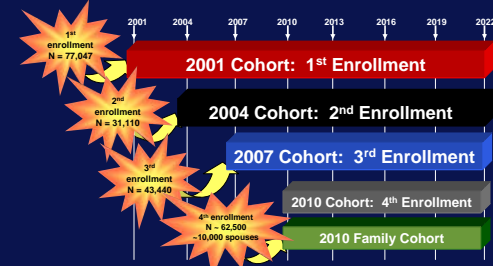


*Additional DMDC specifications: Members must have complete data on social security number, first name, last name, date of birth, sex, race/ethnicity, service branch, component, pay grade, and marital status.

Methods

- Invite 250,000 individuals of Active-duty, Reserve, or National Guard status, with 2-5 years military service experience, oversampling for women and married, to enroll in the **Millennium Cohort Study** in 2010.
- Of the 250,000 invitees, half are married.
- It is estimated that 25% will enroll in the **Millennium Cohort Study** and that 65% will grant permission to contact their spouse (n = 20,313).
- 50% of the referred spouses are expected to enroll in the **Family Study**.
 - N = 10,000
 - Approximately half will be married to service members who have deployed in support of the wars in Iraq and Afghanistan.

Millennium Cohort Family Study Enrollment Timeline



Longitudinal Contact



- Postcards and Study Updates will be sent to participants to promote **Family Cohort** identity, as well as to encourage participants to complete the survey and update their contact information.

Online Participation



- Large cost savings are associated with online enrollment.
- Participants will receive their choice of a \$10 gift card to one of over 40 vendors.



www.familycohort.org

Measured Health Outcomes and Impact

Main Survey Topics:

- Demographic information
- General health (including sleep)
- Spouse, family, child, and service member stress
- Impact of deployment and military service
- Family cohesion, expressiveness, and conflict
- Child behavioral, developmental and general health
- Health services
- Alcohol and tobacco use
- Military specific questions for active-duty spouses

Research will facilitate identification of specific interventions related to:

- Family member resilience
- Deployment-related stress
- Family support dynamics
- Service member and family well-being
- Force readiness
- Military separation
- Barriers to care

Acknowledgements

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The views expressed in this research are those of the authors and do not necessarily reflect the official policy or position of the Department of the Navy, Department of the Army, Department of the Air Force, Department of Veterans Affairs, Department of Defense, or the US Government. Human subjects participated in this study after giving their free and informed consent. This research has been conducted in compliance with all applicable Federal Regulations governing the Protection of Human Subjects in Research.

We are indebted to the Millennium Cohort Study members for their continued participation.

MOMPD
Science to Soldier

Congressional Black Caucus

Washington, DC, 9-14-2010



Responding to the Needs of Military Children and Families: Collaboration, Research, Services, and Policies

Ernestine Briggs-King, PhD
National Center for Child Traumatic Stress
Duke University School of Medicine
American Psychological Association
September 17, 2010

Challenges of Military Children & Families

- Extended/repeated separations
- Shifting family roles and responsibilities
- Increased stress on caretaking parent
- Media exposure
- Impact of exposure on returning parent
- Higher risk of spousal and child maltreatment
- Parental physical and mental health problems, or loss
- Rising rates of military child mental health utilization

NCTSN Collaborative Partnerships



Center for the Study of Traumatic Stress

Collaborating Center NCTSN and DCoE

www.cstsonline.org

Sesame Workshop Coming Home



www.nctsn.org



www.dcoe.health.mil

What is the Millennium Cohort Family Study?



- Assesses the impact of military service on the health and well-being of service members, spouses, and their children
 - Plans to collect data on ~10,000 spouses
 - ~ half married to a service member that has deployed in support of OIF/OEF
 - All military services (includes Reserve and Nat'l Guard)
 - Linked to service member survey (MILCO)
 - Inform policy makers and guide interventions that support resilience & reduce stress

For more information: www.familycohort.org

FOCUS Project Sites

MCB Camp Pendleton, California
MCAGCC Twentynine Palms, California
MCB Camp Lejeune, North Carolina
MCB Kaneohe Bay, Hawaii*
MCB Okinawa, Japan*
MCB Quantico, Virginia
USMC Wounded Warrior Regiment
Naval CBC Gulfport, Mississippi
Naval Base Ventura County, California
Naval Station San Diego, California
Naval Station Norfolk, Virginia*
NAB Coronado Island, California
NAB East Little Creek / Dam Neck, Virginia
NAS Whidbey Island, Washington*
Camp Pendleton- Wounded Warrior Battalion West
Camp Lejeune - Warrior Battalion East



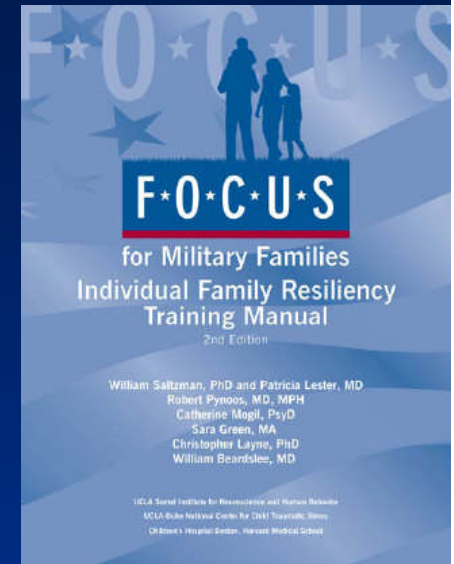
* Initiated for Army & Air Force 9/09 through DOD Mil. Family and Community Policy Office

FOCUS Adaptations

Modified to meet the specific needs of families:

- FOCUS Wounded Warrior
- FOCUS Communication and Remote Education (CARE)
- FOCUS Couples
- FOCUS Early Childhood
- FOCUS Combat Injury
- Focus World

www.focusproject.org



APA Efforts on Behalf of Military Families

- Provide education and consultation to Congress, DoD, VA, GAO, VSOs, and other organizations regarding key mental health issues (e.g., PTSD, TBI, suicide)
- Support legislative initiatives related to:
 - Dual military couples with dependents
 - Family caregivers of veterans
 - Recruitment and retention of military and VA psychologists
- Support the newly formed Senate Military Family Caucus and the established House Military Family Caucus



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Acknowledgments



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NCTSN

The National Child
Traumatic Stress Network



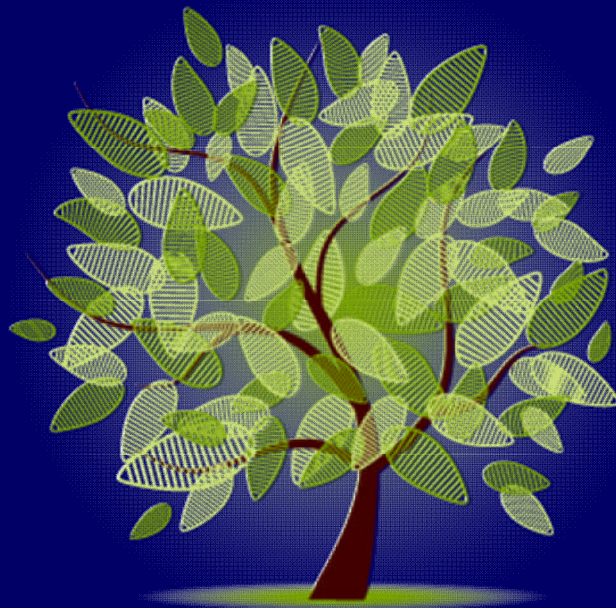
AMERICAN
PSYCHOLOGICAL
ASSOCIATION

FamCo Scientific Review Panel Meeting

San Diego, CA, 9-21-2010



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Science to Soldier



Millennium Cohort
Family Study

1st Annual Scientific Review Panel Meeting

September 21, 2010



Spouse Impact Studies



Millennium Cohort
Family Study

- **Descriptive analyses of demographic, medical, behavioral and emotional characteristics of spouses in military families**
- **Descriptive analyses of spouse receipt of mental health services**



Millennium Cohort
Family Study

Spouse Impact Studies

- **Compare emotional and behavioral and medical problems of spouses of service members deployed in OEF and OIF with spouses of service members deployed to a non-warzone and those not yet deployed**
 - **Account for family strengths and vulnerabilities**
 - **Account for age/development of children in family**

Spouse Impact Studies



Millennium Cohort
Family Study

- **Among spouses with a service member partner who had been deployed to OEF and/or OIF, compare spouse's medical, emotional and behavioral problems between families' whose deployed service member experienced severe readjustment problems (e.g., PTSD symptoms) with families' whose deployed service member did not experience such problems.**
 - **Account for family strengths and vulnerabilities, including spouse anxiety and depression**
 - **Account for age/development of children in family**

Spousal Impact Studies



Millennium Cohort
Family Study

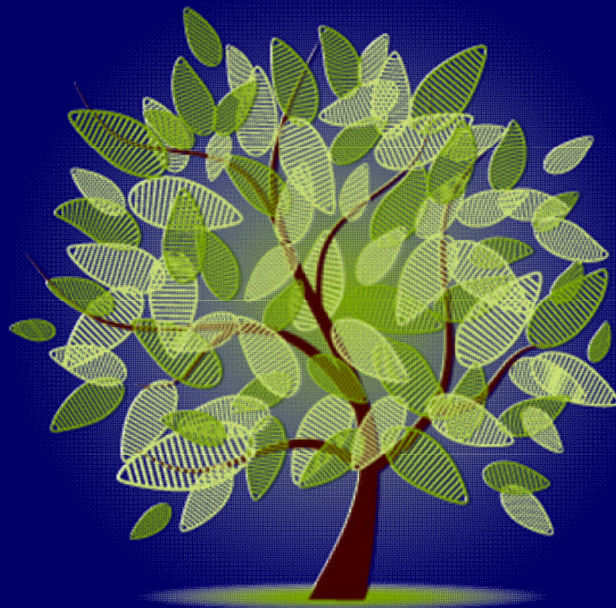
- **Among spouses with a service member partner who had been deployed to OEF and/or OIF, compare quality of marital relationship, marital satisfaction, and family adjustment between families' whose deployed service member experienced severe readjustment problems (e.g., PTSD symptoms) with families' whose deployed service member did not experience such problems.**

Spousal Impact Studies: Dual Deployment Families



Millennium Cohort
Family Study

- **Among spouses who are themselves service members and have a service member partner who has been deployed to OEF and/or OIF, compare health and mental health of spouse, quality of marital relationship, marital satisfaction, and family adjustment between families' in which the spouse has been deployed with families in which the spouse has not been deployed**



Millennium Cohort
Family Study



1st Annual Scientific Review Panel Meeting

September 21, 2010



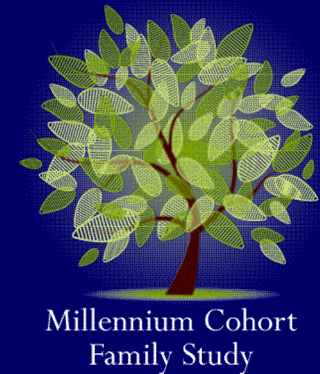
Child and Adolescent Studies



Millennium Cohort
Family Study

- **Descriptive analyses of demographic, developmental, medical, behavioral and emotional characteristics of children in military families;**
- **Descriptive analyses of children's receipt of services from child-serving systems of care and specific mental health services;**

Child and Adolescent Studies



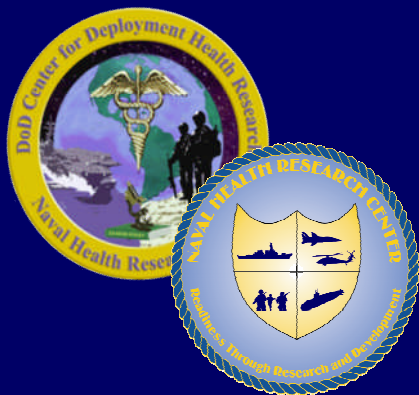
- **Compare emotional and behavioral problems of children with a parent who had been deployed with children without a parent who had been deployed;**
 - **Account for family strengths and vulnerabilities**
 - **Account for age/development of children in family**

Child and Adolescent Studies

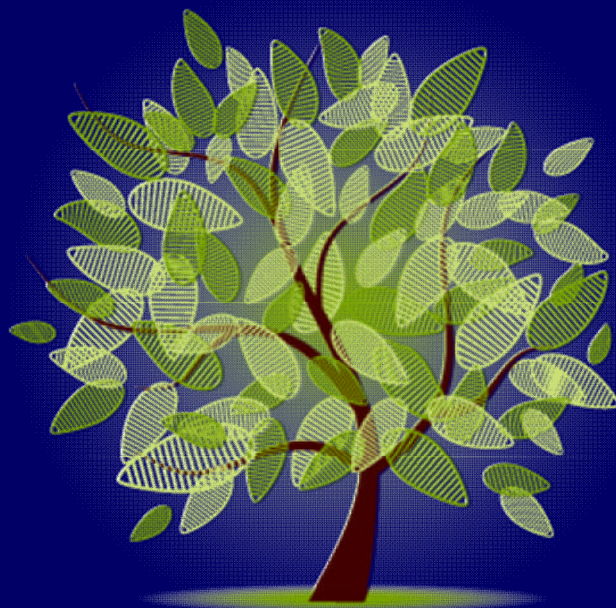


Millennium Cohort
Family Study

- **Among children with a parent who had been deployed, compare children's medical, emotional and behavioral problems between families' whose deployed parent experienced severe readjustment problems (e.g., PTSD symptoms) with families' whose deployed parent did not experience such problems.**
 - **Account for family strengths and vulnerabilities, including spouse anxiety and depression**
 - **Account for age/development of children in family**



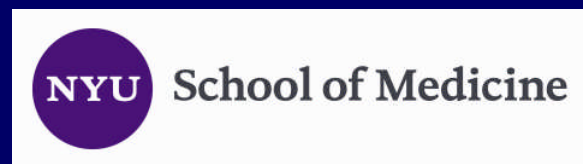
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Nonresponse Analysis



Millennium Cohort
Family Study

- **Nonresponse analyses using Panel 4 members**
 - **Detailed electronic demographic data available for invited Panel 4 military personnel**
 - * Use logistic regression to estimate propensity model for providing spouse contact information
 - * Use logistic regression to estimate propensity model for spouse participating in the Family Cohort
- **Identify potential confounders by comparing Family Cohort participants characteristics to military spouse characteristics**
 - **Only limited information can be obtained on military spouses (e.g . age, gender, race/ethnicity)**
 - * Compare characteristics of Family Cohort participants to all other spouses in the military

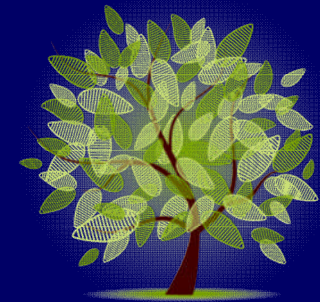
Other Nonresponse Analyses



Millennium Cohort
Family Study

- **Early vs late responder analyses**
 - **Compare characteristics of Family Cohort participants based on the amount of time between receipt of spouse contact information and completion of questionnaire, using time-to-event models**
- **After Cohort has been established, analyses of nonresponse to the first follow-up can be conducted**
 - **Examine characteristics of follow-up responders to assess comparability to baseline responders**

Internal Consistency of Multi-Scale Items



Millennium Cohort
Family Study

- **Use the Cronbach alpha coefficient to investigate internal consistency in response patterns for multi-item scales (e.g. SF-36V, PCL-C, PHQ, FACES)**
 - Cronbach alpha coefficient of 0.7 or greater would indicate sufficient internal consistency
 - Where appropriate, confirm scale dimensionality via confirmatory factor analysis
- **Exploring test retest reliability**
 - Potential substudy among participating spouses, asking them to retake part or all of the survey

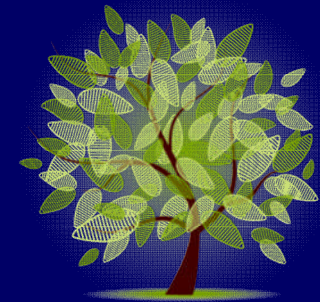
Deployment Comparison



Millennium Cohort
Family Study

- **Perform analyses to compare baseline characteristics of Family Study participants whose Panel 4 spouses did deploy with those whose spouses did not deploy**
 - **Understanding these differences would be useful for future substudies where stratified analyses might be performed**

Cognitive Dissonance Investigation



Millennium Cohort
Family Study

- **Investigate effects of cognitive dissonance and effort justification on study recruitment**
 - Once Panel 4 participant consents, assigned to 1 of 2 groups
 - Group 1 will be asked for permission to contact their spouse for participation in the Millennium Cohort Family Study before taking the survey
 - Group 2 will be asked to give permission after they have completed the survey
 - Group 2 participants are expected to experience cognitive dissonance after completing the 100 item survey, consequently inflating the importance of the survey
 - Hypothesis => Group 2 participants will be more likely to provide their spouses' contact information than group 1 participants based on having experienced cognitive dissonance

Other Analyses to Consider



Millennium Cohort
Family Study

- **Compare self-reported physician diagnosed conditions with electronic ambulatory and hospitalization encounters**
 - A major limitation is that there is not complete visibility of ambulatory visits and hospitalizations for military spouses
- **Birth outcomes among women**
 - **Compare self-report of live birth with electronic medical records**
 - * A major limitation is that there is not complete visibility of ambulatory visits and hospitalizations for military spouses
 - **Exploring potential of validating report of birth defects or other ICD-9 coded birth outcomes**